tion and the CDFA director's willingness to grant an extension. No new pesticides can be registered after January 1986 unless all of the data requirements are met.

Based on the environmental fate data, the CDFA director is required by AB 2021 to establish a list of economic poisons that have the potential to pollute ground water. The selection of pesticides for this list must be based on numerical values that are at least as stringent as EPA's flagging criteria. Pesticides placed on the Ground Water Protection List will be regulated similarly to restricted pesticides. Applicators must report to the commissioner within a week after they use a pesticide on the Ground Water Protection List. All those pesticides on the Ground Water Protection List will be put on the list of restricted-use pesticides. Hence, applicators must obtain permits a week before use and provide detailed information on the location of application. This information then will be incorporated into the detailed use data base discussed earlier.

Monitoring

An important element of ground water protection is monitoring. It is expensive to chemically analyze water samples to detect low levels of pesticide concentrations. The cost of conducting good monitoring programs is increased by the large number of pesticides in use and the large area over which they may be used. It is not feasible to sample every ground water aquifer for every pesticide registered for use. However, if information on usage patterns, chemical characteristics, and hydrogeologic conditions is used, a cost-effective program can be developed. Monitoring costs could be reduced, and a broader understanding of potential problems could be achieved by the development of improved, multiresidue analytic screens for pesticides in water. Such development should be possible at reasonable costs within a few years. Comparable multiresidue analytic methods detecting up to 125 active ingredients in a single test are routinely used by the Food and Drug Administration (FDA) in its food residue testing programs.

Because of the high spatial variability in pesticide use and accompanying variability in ground water contamination, a monitoring program is most effective if pesticide use data, hydrogeologic conditions, and environmental fate information are considered in determining the sampling program. Environmental fate data can be used to determine which pesticides should receive high priority for monitoring because of their propensity for leaching. The use data coupled with hydrogeologic information can be analyzed to determine where samples should be collected. Toxicological data may also be used to assign priorities to pesticides for inclusion in a sampling pro-